

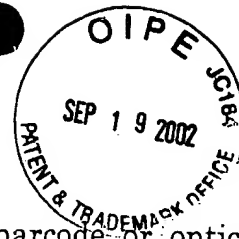
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swipe cards or tape, optically scanned from hard copy by barcode or optical character readers or, as a last resort, entered by keyboard.

Upon entry into the message bank 30, the messages are stored in table format of the type illustrated in FIG. 4. The message bank 30 contains the date that the message is to be delivered, the priority of delivery (e.g., urgent), the type of message, (e.g., coupon, warning, advertisement, etc.), the text and graphic of the message, the destination criteria (e.g., national, specific subscribers, selected groups of subscribers, etc.) and whether the message needs to be broken into parts due to its length.

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The message bank will, on a daily basis, process those messages that are to be delivered during such day. FIG. ⁴ illustrates the manner in which a sample batch of message may be processed for a particular day. The messages are initially sorted by the date on which they are to be delivered and then by priority. Thus, all urgent messages (e.g., priority 1) would be delivered before increasingly less urgent messages (e.g., priorities 2-0). Messages of a particular priority, e.g., 1 would be delivered in the order that they were initially received by the system.

The database manager 40 is a sophisticated system, preferably of the Oracle or Informix genre, due to its need to handle multiple databases including the subscriber directory 10, the message bank 30, and schedule the transmission of messages.

being transmitted to a specific appliance or appliances having a private key, it looks to match the PMA number of the message with that of the appliance. Standard encryption techniques used in RSA and PGP use a public key/private key encryption. An algorithm in the PMA will decrypt the message, process the
5 decrypted message and print it out. It can only be decrypted by the PMA with the private key. If there is a match, it then performs a second function by attempting to match the appliance's private PIN number with the PIN number being transmitted. If both match, the message is processed. If not, the process is aborted.

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10 FIG 15 illustrates the manner in which messages within the appliance may be processed and eventually printed using a message interpretation process. Incoming messages will typically be received in a highly condensed form as the Sequence Compiler has adopted compaction processes such as zipping, zero compression, bit packing and general data compression. The CPU
15 must then decode and decompress the message content.

As previously discussed, in order for a Pager-Network provider to handle the message in a normal manner, the message must be contained within a specified packet length or, alternatively, will be packetized over multiple packets. Some messages, particularly coupons, will include significant graphic
20 content and the total message may have to be transmitted in the form of a packet series. This necessitates inclusion of a pre-content header indicating the